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HERBERT SPENCER'S PSYCHOLOGY*

The Principles of Psychology. By Herbert Spencer.
Second edition. (Williams and Norgate.)

II.

TO the healthy scientific mind the fine-spun arguments and the wonderful logical achievements of metaphysicians are at once so bewildering and so distasteful that men of science can scarcely be got to listen even to those who would undertake to show that the arguments are but cobwebs, the logic but jingle, and the seeming profundity little more than a jumble of incongruous ideas shrouded in a mist of words. Hence, it is hardly known that one of the two living thinkers who in philosophy stand head and shoulders above all their contemporaries, has put forth all his strength in a grand effort to demonstrate the baselessness, the inconsistency, the unreality of all anti-realistic metaphysics. The disciples of Berkeley and Hume, skilful in argument, and generally armed with a psychology superior to that of their antagonists, have hitherto gained easy victories over the hosts of theologians, who, confident in the truth of their cause, have stood forward, as one might say, unarmed and with naked breast, to fight for the reality of mind and matter. So easily and so invariably have the sceptics and idealists remained masters of the field against all-comers that they have agreed among themselves to regard realism as an exploded superstition "altogether unworthy of the name of philosophy" (Prof. Bain). But the end is not yet. They will have once more to look to their weapons. In Mr. Spencer realism has for the first time found a champion that can do it justice. Nothing behind the acutest idealist in subtlety and force of intellect, he brings to bear on the great metaphysical question of the reality of an external world a psychology as much superior to that of the idealists, as their mental science was superior to that of the divines they so easily vanquished.

Of course we shall not attempt to sketch the argument that occupies nineteen chapters of Mr. Spencer's volume; which has for its groundwork his whole system of psychology, and on the issue of which he considers that his entire philosophy is at stake; for, in his own words, "should the idealist be right, the doctrine of evolution is a dream." It may, however, not be altogether profitless to dip into this elaborate argument at one or two places. "The argument of the Realist," says Mr. Spencer, "habitually fails from not having as a fulcrum some universally-admitted truth which the Idealist also has to admit." This necessary fulcrum, he alleges, is to be found in the Universal Postulate, which is, that we must accept as true that of which the negation cannot be represented in thought. But, it would almost seem no more easy to obtain universal assent to the doctrine, that the ultimate appeal must be to the inconceivableness of the negation of a proposition, than to establish the truth of realism by argument without the aid of such a fulcrum. At least, Mr. Mill and Mr. Spencer have been battling over this question for twenty years, without coming much nearer agreement than at the beginning. But though

* Continued from p. 300.

they may have done little towards their mutual instruction, many students of philosophy must have profited greatly from what they agree in describing as their "amicable controversy." And in venturing briefly to review the discussion, our justification must be that we do so as a disciple, who studies with reverence the works of both these imperial intellects. We shall first endeavour to outline in as few words as possible what appears to us an important part of Mr. Spencer's argument, leaving his full meaning to become apparent when we proceed to notice some of Mr. Mill's strictures thereon. Propositions, says Mr. Spencer, "are the ultimate components of knowledge. The simplest intuition equally with the most complex rational judgment, has the same fundamental structure: it is the tacit or overt assertion that something is or is not of a certain nature—belongs or does not belong to a certain class—has or has not a certain attribute." "Propositions, then, constitute the common denomination to which all systems of belief, simple or complex, have to be reduced before we can scientifically test them." But propositions are of many kinds; some are relatively simple, some are highly complex. "There are some propositions which tacitly assert little more than they avowedly assert; while there are other propositions in which what is tacitly asserted immensely exceeds in amount what is avowedly asserted." Accordingly, to "compare conclusions with scientific rigour, we must not only resolve arguments into their constituent propositions, but must resolve each complex proposition into the simple propositions composing it." When intelligence is thus resolved into its simplest elements, it is found that there are cognitions of which the terms cannot be separated. Such cognitions we necessarily accept. To ascertain that the predicate of a cognition invariably exists along with its subject, all we can do is to make a deliberate and persistent effort to conceive the negation of the proposition, and having done this, "to assert the inconceivableness of its negation, is at the same time to assert the psychological necessity we are under of thinking it, and to give our logical justification for holding it to be unquestionable." Further, as it is only by the aid of cognitions of this class, and for the trustworthiness of which no higher warrant can be given, that propositions are linked together so as to form what we call proof or disproof, since "logic is simply a systematisation of the process by which we indirectly obtain this warrant for beliefs that do not directly possess it," it must follow that an attempt to invalidate a cognition of this class by a process of reasoning must somewhat resemble the mechanical absurdity of trying to lift the chair on which one sits. Now, the belief that a universe exists apart from and independently of our states of consciousness, is, according to Mr. Spencer, a cognition possessing this quality of highest certainty. When a man looks at a book without speculating, "he feels that the sole content of his consciousness is the book considered as an external reality, . . . he feels that do what he will he cannot reverse this act; . . . while he continues looking at the book, his belief in it as an external reality possesses the highest validity. It has the direct guarantee of the Universal Postulate."

Against this Mr. Mill has argued that the proposed warrant of the truth of propositions cannot be accepted, if for no other reason, because we know as a matter of

x

history that some propositions the negation of which was at one time inconceivable are now known to be false. His examples are—that in sunrise and sunset, it is the sun that moves; that gravitation cannot act through space absolutely void; and that there cannot exist antipodes—men sticking on by their feet to the under side of the earth. For the truth of each of these propositions Mr. Mill thinks that our forefathers had the warrant of what Mr. Spencer calls the Universal Postulate. “To this criticism of Mr. Mill,” says Mr. Spencer, referring to the first and last of these propositions, “my reply is that the propositions erroneously accepted because they seemed to withstand the test, were complex propositions to which the test is inapplicable.” Unfortunately, in his anxiety to “leave no possibility of misapprehension,” Mr. Spencer mentioned, among other things, that we cannot by simple comparison of two states of consciousness know that the square of the hypothenuse of a right-angled triangle equals the sum of the squares of the other two sides. The strange result has been that Mr. Mill has, we cannot help thinking, fallen into a complete misapprehension of his meaning. In the eighth edition of his *Logic*, Mr. Mill has had the opportunity of replying to Mr. Spencer’s argument as it stands in the volume before us. He there says: “It is but just to give Mr. Spencer’s doctrine the benefit of the limitation he claims—viz. that it is only applicable to propositions which are assented to on simple inspection, without any intervening media of proof. . . . But in all the three cases which I have just cited (those mentioned), the inconceivability seems to be apprehended directly; no train of argument is needed, as in the case of the square of the hypothenuse, to obtain the verdict of consciousness on the point.” We submit that the quality of being “assented to on simple inspection, without any intervening media of proof” is not the distinguishing characteristic of what Mr. Spencer calls a simple proposition. The propositions that can be properly brought to the test of the inconceivableness of their negation are not such as are assented to on simple inspection, but such as “are not further decomposable.” Until this misconception on the part of Mr. Mill furnished conclusive evidence to the contrary, we were inclined to think that here, as elsewhere, Mr. Spencer had been needlessly tedious in stating and restating, illustrating and re-illustrating his meaning. That after all Mr. Mill should have so completely missed the true nature of his distinction of propositions into simple and complex is very remarkable. Had not Mr. Spencer declared that the propositions in dispute were examples of what he considered complex propositions? There is no intervening media of proof when we automatically interpret our sensations of sight into such a cognition as—“There is an old man.” Yet this is one of the propositions tediously analysed by Mr. Spencer, “to show distinctly the number of propositions included in an ordinary proposition which appears simple. Again, “On a cold winter’s night a gas-light seen through the window of a cab, or a light in a shop looked at through a pane that has been much rubbed, is surrounded by a halo. Whoever examines will see that this halo is caused by scratches on the glass, the curves of which are arcs of circles having the light for their centre. The proposition which expresses the result of his observation, and seems

to assert no more than the result of his observation, is that on the part of the glass through which he looks the scratches produced by rubbing are arranged concentrically with the light.” Included in this apparently simple proposition, however, is this other—“that there does not exist on the same spot scratches otherwise arranged, immeasurably exceeding in number the concentric scratches.” The truth is that “the scratches on any part of the glass have no concentric arrangement at all, but run in countless directions with multitudinous curvatures.” The propositions in question obviously belong to this class. In the assertion, the sun moves from east to west, there is included the other proposition—the earth does not revolve on its axis from west to east. We scarcely think that Mr. Mill will assert that any human being ever found it impossible to conceive, in Mr. Spencer’s sense, that a sphere should so revolve. Thus far, then, we are bound to say that Mr. Spencer’s argument remains intact.

With regard to gravitation we cannot do better than quote the note in which Mr. Mill replies to Mr. Spencer on this point:—

“In one of the three cases, Mr. Spencer, to my no small surprise, thinks that the belief of mankind ‘cannot be rightly said to have undergone’ the change I allege. Mr. Spencer still thinks we are unable to conceive gravitation acting through empty space. ‘If an astronomer vowed that he could conceive gravitative force as exercised through space absolutely void, my private opinion would be that he mistook the nature of conception. Conception implies representation. Here the elements of the representation are the two bodies and an agency by which either effects the other. To conceive this agency is to represent it in some terms derived from our experiences—that is from our sensation. As this agency gives us no sensations, we are obliged (if we try to conceive it) to use symbols idealised from our sensations—imponderable units forming a medium.’ If Mr. Spencer means that the action of gravitation gives us no sensations, the assertion is one than which I have not seen, in the writings of philosophers, many more startling. What other sensation do we need than the sensation of one body moving towards another? ‘The elements of the representation’ are not two bodies and an ‘agency,’ but two bodies and an effect; viz. the fact of their approaching one another. If we are able to conceive a vacuum, is there any difficulty in conceiving a body falling to the earth through it?”

We are compelled to say that Mr. Mill could not have been much more surprised at Mr. Spencer’s statement than we are at his answer. What was it that Newton could not conceive, but which, Mr. Mill says, we have no difficulty in conceiving? Was Newton incapable of forming a mental representation of “one body moving towards another?”—an experience that in common with everybody else, he had hundreds of times every day of his life. No. To put it in plain rough language, he was unable to conceive how one body could move another without in some way pushing or pulling at it. Hence, when he tried to represent in thought the action of the sun upon the earth he found it necessary to imagine a medium—an unbroken line of physical connection between the two bodies. Have we got beyond Newton in this respect? or is it not rather, as Mr. Spencer says, that our scientific men have simply “given up attempting to conceive how gravitation results.” Nay, are there not

at the present moment some indications that before long scientific men may return to this very problem?

Let us now advance a step. When it is found that we cannot conceive the negation of a proposition—that the subject and predicate cannot be separated in thought; “then, indeed,” says Mr. Mill, “the inability to separate the two ideas proves their inseparable conjunction, here and now, in the mind which has failed in the attempt: but this inseparability in thought does not prove a corresponding inseparability in fact; nor even in the thoughts of other people, or of the same person in a possible future.” No matter for the present, how we come by our cognitions, this is surely admitting what Mr. Spencer calls the psychological necessity of thinking the proposition. In the next place, we must confess that we have never been able intelligibly to translate into the language of idealism those anti-realistic arguments that appeal to “fact” and to the experiences of “other people.” But, whatever may be meant by fact, and whatever may have a place in the minds of other people, it must for ever remain nothing to those in whose consciousness it can be neither presented nor represented. Our science of numbers is not likely to be disturbed because it can be written in words that, perhaps in some inaccessible corner of the universe, or in some mind of a different make from the human, twice two makes five. We have already examined the examples given by Mr. Mill of propositions that have, as he thinks, passed from the condition of being inconceivable to that of being both conceivable and believed, and therefore we do not think it necessary to discuss the probability of any really simple and inconceivable proposition becoming conceivable in the mind of the “same person in a possible future.”

We must pass to the next step in the argument as sketched above. Does reasoning rest on the postulate? We cannot help thinking with regret that Mr. Mill has not felt it necessary to put forth his full strength on this point; and we are by no means sure that we have grasped his full meaning. His words are:—“To say that when I apprehend that A is B and that B is C, I cannot conceive that A is not C, is to my mind merely to say that I am compelled to believe that A is C. If to conceive be taken in its proper meaning, viz., to form a mental representation, I may be able to conceive A as not being C. After assenting with full understanding to the Copernican proof that it is the earth, and not the sun, that moves, I not only can conceive, or represent to myself, sunset as a motion of the sun, but almost everyone finds this conception of sunset easier to form than that which they nevertheless know to be the true one.” This, as we understand it, seems open to the reply that, had sunset, considered as a motion of the sun, been inconceivable to begin with, no argument would have been needed to disprove it. Having followed the Copernican proof, we cease to believe that the sun moves, we remain, however, still able to conceive its doing so; for though we cannot help believing that of which we cannot conceive the negation, it does not follow that we are unable to conceive the negation of everything that argument has compelled us to believe. But, whether by following a sound argument we are or are not rendered incapable of conceiving the reverse of the conclusion, has, in reality, nothing to do with the question whether reason-

ing rests or does not rest on the postulate. To invalidate Mr. Spencer's argument by the method he has adopted, Mr. Mill would require to be able to represent in thought, not the sun moving through the heavens, in spite of the Copernican proof to the contrary but that at any step in the argument the conclusion need not follow from the premises. If he could do this he might still be convinced by argument, but we do not see how he must necessarily be so. Mr. Spencer's contention is that reasoning rests on the postulate, not because a valid argument makes the reverse of the conclusion inconceivable, but because the axioms of logic have no higher warrant.

Want of space forbids us entering further into the controversy. For the same reason we are unable to enter upon the inquiry whether we can properly be said to believe that of which we cannot form a mental representation. Mr. Spencer's opinion is that we cannot, and accordingly “that anti-realistic beliefs have never been held at all. They are but ghosts of beliefs, haunting those mazes of verbal propositions in which metaphysicians habitually lose themselves. Berkeley was not an idealist; he never succeeded in expelling the consciousness of an external reality, as we saw when analysing his language and his reasonings. Hume did not in the least doubt the existence of matter or of mind; he simply persuaded himself that certain arguments ought to make him doubt. Nor was Kant a Kantist: that space and time are nothing more than subjective forms was with him, as it has been and will be with every other, a verbally-intelligible proposition, but a proposition that can never be rendered into thought, and can never therefore be believed.”

DOUGLAS A. SPALDING

GEIKIE'S PRIMER OF PHYSICAL GEOGRAPHY

Physical Geography. By Prof. Geikie. Science Primer Series. (Macmillan.)

IT must not be supposed that this is the Physical Geography which we have been expecting from Prof. Geikie. It is a little book of 110 pages, truly a primer, and only makes us more eager to get a larger work.

The primer is written in a vivacious style; the style of a man really interested in what he is talking to his readers about; and in all respects suitably written for its purpose. It would be a little too patronising if it were intended for any but the very young, who like being taken into the confidence of the writer, and spoken to as young friends. It is to be hoped that a larger work may be equally vivacious and vigorous without this characteristic, which is, to repeat, not a fault in the primer, but would be a serious fault in the larger work intended for older boys and readers generally. It is a fault that pervades Kingsley's scientific books: it is a small annoyance at first, but finally “aggravates” one beyond all endurance. Moreover, the book is well illustrated with new, good, and unconventional woodcuts, and is thoroughly well-arranged and printed.

Now for its contents. After its introduction, which is in fact on “eyes and no eyes,” we have the shape of the earth, day and night, the air, wind, vapour, dew, mist, rain, snow; the circulation of water on the land, springs, hard and soft water, atmospheric denudation (in shorter words than these), brooks, rivers, snow-fields, glaciers;